

DATA SHEET

Multiguard® In-depth Premix-MIP

In-depth crystalline technology based Waterproofing additive

Product Code No. H-0703

Division 07

Waterproofing

Overview

Multiguard In-Depth Premix(MIP) is designed to enhance by effectively waterproofing the concrete and reducing the shrinkage cracks. This provides a cost effective solution to membrane systems while increasing concrete's durability. Multiguard In-Depth Premix is added to fresh concrete easily at the batch plant or directly into ready mix trucks. It works to continuously prevent moisture from penetrating through the Concrete by creating a chemical reaction within the pores and capillaries to enhance the hydration process of the cement component within the concrete. As an additive for concrete, the **Multiguard In-Depth Premix (MIP)** will promote additional CSH crystals to grow within the concrete utilizing the concrete's own natural hydration process to reduce the permeability of the concrete. The increased hydration process also allows for an increased ability for the concrete to self-heal micro cracking upon the presence of moisture.

Features

- MIP is a one time only application for the life of the concrete.
- It is user friendly and easy to apply.
- It is permanent for the life of the concrete.
- MIP is added directly to the fresh concrete during mixing or premixed with cement powder.

Advantages

- Shrinkage cracks are reduced by up to 60%
- Water demand is reduced by approximately 7%
- Further waterproofing of substrate is eliminated
- MIP will continually improve impermeability benefits with time
- Will assist concrete in the hydration process
- Structure is protected against water penetration through micro-cracks by autogenously healing of all future micro-cracking
- MIP reactivates the waterproofing mechanism should water be present in the future
- It increases the durability of the concrete
- Structure is protected against cracking and spalling
- It permanently stops water penetration into the concrete
- MIP provides the best quality to cost ratio in the industry

- It eliminates the need for any other waterproofing system

Benefits

- Protection of reinforcing steel against chemical attack
- Protection against deterioration of the concrete due to waterborne chemical attack
- Protection against deterioration of the concrete due to AAR/ASR
- Protection against deterioration of the concrete due to cast in contaminants
- Protection against deterioration of the concrete due to carbonization
- Protection against heavy hydrostatic pressure
- Protection against deterioration due to freeze/thaw environments

Recommended for

- Swimming pools
- Tunnels and subway systems
- Parking garages
- All below grade concrete foundations
- Rooftops
- Dry vaults
- Water towers and water reservoirs
- Marine structures
- Pipes
- Bridge decks
- Concrete walls and floor
- Sewage and water treatment plants

Application

Multiguard In-Depth Premix is a dry powder that is added directly to the wet mix concrete during batching. It may be added directly to powdered cement, to the ready mix truck prior to site arrival or even at site. The dosage rate is 0.8-2 kg per 100kg of cement (see Dosage).

Reduce the water component by 7 to 10%, even though the concrete will look less wet than it would normally look, it will provide an increased slump and workability to offset the reduction in water, making it easy for pouring and placing. Multiguard In-Depth Premix will increase productivity.

Reduce or eliminate air-entraining admixtures as required. Multiguard In-Depth Premix will normally increase air entrainment by 1 to 3%.

Mix for 10 minutes at high speed before placing to insure a thorough mix. Should a superplasticizer be required, add it after the addition of the **Multiguard In-Depth Premix**. Do not add water to the mix to increase slump. Place the concrete within 45 minutes to utilize the maximum benefits of flow and placement values. Avoid early finishing and over troweling.

NOTES:

- Multiguard In-Depth Premix does delay initial and final set times under most conditions.
- Multiguard In-Depth Premix is free of oils, stearates, and chlorides based materials.

Physical Properties

Color	gray
Appearance	granular powder
Max Particle Size	US mesh 30
Solids	100%
Bulk density	1.30
pH	13
Water Resistance	170 m head pressure

Curing

Standard concrete wet curing procedures should be followed.

Standards & Certification

- * Manufactured as per **CE** and the product meets the requirements of the applicable EC directives.
- * ASTM C-1012-12: Rapid chloride penetration, reduction by more than 49% for 0.8% dosage
- * ASTM C109: Compressive strength, increase by more than 9%
- * DIN 1048 Part 5: Coefficient of Permeability

- * ASTM C1556-4: Reduction in Chloride Coefficient
- * ASTM C1305: Self-Healing or Crack Bridging
- * ASTM C494: Compatibility with other Admixtures

Dosage

Dosage is 0.8-2% of cement content = 0.8 to 2kg of Multiguard In-Depth Premix per 100kg of cement, 3kg of Multiguard In-Depth Premix for every 300 kg of mortar or for 1m³ concrete. Concrete with higher cement contents will require proportionally more **Multiguard In-Depth Premix**.

NOTE:

Premix is measured to the cement and cementitious components such as fly ash and silica fume only and is not measured to the full concrete design. Be sure not to include water, sand or aggregates in the dosage component

Precautions

This material becomes caustic when mixed with water or perspiration. Avoid contact with skin or eyes. In case of skin contact, wash with soap and water. Flush eyes immediately with warm water for several minutes. If ingested, do not induce vomiting. If victim is alert, give two glasses of water. Avoid breathing dust. Wear long sleeves, eye goggles and a dust mask.

See the material safety data sheet for this product.

Packaging

25kg bags or pails

Product of :



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